

**Study  
Report  
2003-01**

## **Training Requirements of Battle Staff NCOs in Digital Units**

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**United States Army Research Institute  
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**June 2003**

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**A Directorate of the U.S. Total Army Personnel Command**

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Lockheed Martin Technology Systems, Inc.

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## FOREWORD

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As part of U.S. Army transformation, advanced technology is changing how Tactical Operation Centers (TOCs) process vast amounts of information. This study addresses questions about how the role of the Battle Staff Noncommissioned Officer (BSNCO) has changed in TOCs supported by digital technology. The work, performed under contact No. GS-23F-0081K to Lockheed-Martin Integrated Systems was requested by the U.S. Army Training and Doctrine Command (TRADOC) and supported by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI).

This study was conducted by administering questionnaire surveys, performing observations, and interviewing BSNCOs to determine how their role has changed with the fielding of digital technology. Interim results were presented to Mr. Robert Seger, Assistant Deputy Chief of Staff, Training (ADCST), TRADOC, and LTC Mark Wilson, from the office of Assistant Deputy Chief of Staff for Training, West (ADCST-W), Collective Training Directorate. Final results have been presented to DCST-W, the Commandant, and the Command Sergeant Major of the Sergeant Major Academy.



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The authors would like to thank LTC Mark L. Wilson, Deputy Chief of Staff for Training, West Collective Training Directorate and Dr. Kathleen A. Quinkert, TRADOC Scientific Coordination Office for their thoughtful contributions to this report. Our most sincere gratitude goes to the Battle Staff NCOs who unselfishly participated in this data collection effort. The participating units are listed below.

1st BDE, 4ID  
1-5 CAV, 1CD  
2-12 CAV, 1CD  
544 MAINT BN, 13 COSCOM  
3-8 CAV, 1CD  
4th BDE, 4ID  
1-44 ADA, 4ID  
1CD DIVARTY CPX  
4ID DIVARTY TOCEX  
1-227 AVN TOC TNG, 1CD  
2-5 CAV, 1CD  
404 DASB, 4ID  
1-8 CAV, 1CD  
4th BDE, 1CD  
DISCOM, 1CD  
104th MI, 4ID  
8th ENG  
3-16 FA, 4ID  
4-5 ADA, 1CD (Q)  
UFL (Various analog & digital TOCs)  
1CD Pegasus Point  
2 BCT 4ID TOC TNG  
UFL, 1-30 180<sup>th</sup> TRANS, 13<sup>th</sup> COSCOM  
49<sup>th</sup> TRANS, 13<sup>th</sup> COSCOM  
UFL Setup,  
20<sup>th</sup> ENG, 1CD  
UFL (DTAC, DMAIN, 1CD & 4ID; 3 BCT, 4BDE, D/A, 1CD; SC  
15<sup>th</sup> MI, 504<sup>th</sup> MI BDE  
1<sup>st</sup> MED BDE  
1<sup>st</sup> BDE, 1CD  
BSNCOC # 13-02 (FT Bliss)

# TRAINING REQUIREMENTS OF BATTLE STAFF NCOs IN DIGITAL UNITS

## EXECUTIVE SUMMARY

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### Study Requirements:

As the U.S. Army moves towards the Objective Force, digitization is a critical aspect of the transformation process. Current institutional training for Battle Staff Noncommissioned Officers (BSNCOs) does not include instruction on how to employ digital technology to leverage performance in the Tactical Operations Center (TOC). This leads to the questions: "How does the role of the BSNCO change in the TOC supported by digital technology?" "How can training best support the BSNCO in a digital environment?" and "When and where should this training take place?"

### Procedure:

Data were collected from 522 active and reserve component BSNCOs. These NCOs were assigned to coordinating and special staff sections from battalion through corps in both analog and digital units. Every digital unit at Fort Hood, Texas participated in the data collection phase. Also included in the project were selected BSNCOs at Fort Carson, Colorado; Fort Sill, Oklahoma; Fort Bliss, Texas; Texas Army National Guard; and Reserve Component NCOs attending the BSNCO Course at Fort McCoy, Wisconsin. Questionnaire surveys, observations, and subjective opinions from NCOs and Officers obtained during group and individual interviews provide the basis for this report.

### Findings:

The majority of Battle Staff NCO Course (BSNCO Course) graduates responded that the current institutional training course is quite effective in preparing NCOs to perform in analog TOCs. The majority of graduates assigned to digital units believe the course is not very effective in preparing them to lead, train, or supervise soldiers who operate digital systems. Although the course does not include digital operator training, they believe that the current training (e.g. graphics and overlays; military decision making process) provides a foundation and is critical in the tactical employment of digital systems.

Only 53 percent of NCOs assigned to BSNCO positions are BSNCO Course graduates. The NCOs assigned to BSNCO positions who have not attended the course feel under-qualified to perform their duties due to the lack of institutional training.

Approximately two-thirds of BSNCOs in digital TOCs had some formal digital training, with the overwhelming majority of that training consisting of a 1-2 week New Equipment Training (NET) course. BSNCOs who lack formal training obtain their digital skills through on-the-job-training (OJT) during Sergeants Time Training and collective training events.

Eighty-eight percent of BSNCOs assigned to digital TOCs responded that it would be beneficial to their job performance if digital systems were taught in the BSNCO. They believe the training should be to a level of proficiency that provides them with the necessary digital skills to train and supervise their soldiers in digital TOC operations.

BSNCOs in analog TOCs perform those tasks that are taught at the BSNCO. The digital tasks performed by BSNCOs in digital units are not instructed at the BSNCO. However, they are published in a handbook (ST 20-101-5-ABCS) developed by Warrior-T, an Army Training Support Center training development integrator at Fort Hood, Texas.

The role of the BSNCO has changed from the analog to the digital TOC. They are now multifunctional information managers who integrate all the Army Battle Command Systems within the TOC to effectively respond to the commander's requests for information.

#### Utilization of Findings:

These findings should be included in decisions made regarding future course development of the BSNCO and will help to define the role of the BSNCO in digital TOCs. Course developers and trainers should consider recommendations concerning training opportunities for BSNCOs and means of enhancing digital training to address what BSNCOs report are shortfalls in the current system.

# TRAINING REQUIREMENTS OF BATTLE STAFF NCOs IN DIGITAL UNITS

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## **Training Requirements of Battle Staff NCOs in Digital Units**

### **The Problem**

Through the Objective Force process, the United States Army is transforming to shape and field a force prepared to meet future challenges. This versatile force will have the capabilities, particularly the digital technology, necessary to optimize the flow of information and enhance situational awareness. Crucial enlisted positions affected by the implementation of these digital technologies and equipment includes those assigned to Battle Staff Noncommissioned Officers (BSNCOs) working in Tactical Operations Centers (TOCs).

The role of the Battle Staff is to help the Commander recognize and anticipate battlefield activities in order to make decisions and act faster than the enemy. In a TOC for the traditional Army force, Non-Commissioned Officers (NCOs) have a vital role in organizing, analyzing, managing, and presenting vast amounts of information to support the Commander's decision making. Once a decision is made, the Commander depends on the staff to communicate the decision to subordinates in a manner that quickly focuses the necessary capabilities to achieve the Commander's intent. The question is how the NCO's role may be changing as the Army becomes increasingly dependent on information technologies to support mission accomplishment.

This study documents how information technology changes the role of the Battle Staff NCO by comparing digital and analog (traditional) units. This was done by observing NCOs under working conditions in places such as the traditional TOC and the "digital" TOC at Fort Hood, Texas. The study compares and analyses differences between the traditional and the digital TOC and how to train the delta. These identified differences will support efforts to refine/improve digital battle staff procedures taught to BSNCOs.

The BSNCO course includes a nonresident phase and a six-week resident phase taught at the Sergeants Major Academy at Fort Bliss, Texas. The course focuses on battalion and brigade level staffs, with training on plans, orders, graphics, overlays, intelligence preparation of the battlefield, and combat support services. The course culminates in a Command Post Exercise where Battle Staff NCOs apply what they have learned. At the time of this study, institutional training for Battle Staff NCOs did not include instruction on how to use digital technology to leverage performance in the TOC.

The intended audience of this study is both its sponsor, the Assistant Deputy Chief of Staff for Training - West (ADCST-W) who is concerned with the training of the BSNCO operating in the digital TOC and others in the training arena who must face similar challenges brought about by the digitization of the military which often can result in more senior personnel having less technical knowledge than the junior personnel whom they are responsible for supervising, leading, and training.

## **Technical Objectives**

The following technical objectives guided the research project:

- Compare role of the BSNCOs in TOCs supported by analog equipment versus TOCs supported by digital equipment.
- Determine how well the demonstrated task knowledge matches what is taught in the Battle Staff Noncommissioned Officer Course (BSNCOC) and provide recommendations for eliminating any gaps.
- Describe how BSNCOs in digital TOCs obtain their digital skills training and the relevance of the digital skills training to their jobs.
- Provide recommendations that might help guide future training needs as the U.S. Army moves toward the Objective Force.

## **Method**

The research consisted of three principal efforts: (1) BSNCOC curriculum review (Appendix A), (2) Center for Army Lessons Learned (CALL) document review, and (3) data collection. The initial step involved reviewing the BSNCOC curriculum to determine tasks taught for later comparison with tasks performed in a digital environment. Secondly, articles relevant to the area of interest were requested from CALL to solicit information that could be integrated in the final report. The only article relevant to the project returned by CALL was *Commanding a Digital Brigade Combat Team Tactics, Techniques, and Procedures* authored by COL Ricky Lynch (2001). Third, data collection followed the document review.

Data collection was conducted in two phases. Phase I was the administration of a hard copy questionnaire to BSNCOs assigned to analog (non-digital) and digital units. This was followed by a group interview session with the same NCOs. Each session consisted of completing the questionnaire (approximately 30 minutes) and a group interview (approximately 1 hour). Phase II consisted of individual observations and individual interviews. During phase II, BSNCOs were observed performing their jobs in tactical settings to collect data on tasks being performed. Individual interview sessions followed observations where possible; the tactical training scenario prevented individual interviews on several occasions. Details of the data collection process follow below.

## **Data Collection Procedures**

The project's goal was to collect data from approximately 300 BSNCOs in both analog and digital units who have (1) graduated from the BSNCOC and who were (2) assigned to units in which their BSNCO skills are used on a regular basis. The data collection efforts were focused primarily on units at Fort Hood, Texas because it is home to the Army's first digital division (4<sup>th</sup> Infantry Division), the ongoing fielding of the second digital division (1<sup>st</sup> Cavalry Division), and to various analog units. Also included



in the project were selected BSNCOs at Fort Carson, Colorado; Fort Sill, Oklahoma; Fort Bliss, Texas; Texas Army National Guard; and Reserve Component NCOs attending the BSNCO at Fort McCoy, Wisconsin. This sampling reflects the most efficient data collection within the time and funding limits of this contractual effort. This precluded including Fort Lewis, an important Army digital site, from this effort.

To expedite gaining access to units at Fort Hood, Texas for data collection, the study plan was briefed to the III Corps Command Sergeants Major (CSM), Major Subordinate Command CSMs, and separate brigade/battalion CSMs during an installation CSM meeting on May 9, 2002. The CSMs unanimously pledged their support to the study and gave permission to contact unit S-3s directly to schedule data collection visits.

### **Graduate Selection**

The graduate selection process involved several steps: (1) III Corps' Standard Installation/Division Personnel System rosters were reviewed to determine NCOs with the BSNCO ASI (2S) and their unit of assignment; (2) The selected names were cross-referenced against a United States Army Sergeants Major Academy (USASMA) roster of Fiscal Year 01/02 BSNCO graduates; and (3) Personnel locator information was reviewed and units were contacted to determine if the selected NCOs were still assigned to BSNCO positions. To maximize the number of participants, all NCOs with the BSNCO ASI, regardless of graduation date and non-graduate NCOs currently assigned to BSNCO positions were included.

### **Questionnaire Survey**

A hard copy questionnaire survey (see Appendix B) was administered to BSNCOs to elicit data about:

- (1) The effectiveness of the BSNCO Course in preparing NCOs for their duty positions in both analog and digital TOCs.
- (2) The impact of digital training on their roles.
- (3) The location, method, content, and the effectiveness of various digital training that BSNCOs assigned to digital units receive.

### **Observations**

Visual observations were conducted on BSNCOs performing their jobs in tactical settings (Command Post Exercises, Field Training Exercises, etc.) to collect data on tasks being performed. The observations were conducted in analog and digital TOCs at all levels of command from battalion through corps.

## Interviews

Two different interview sessions were conducted: one for group and one for individuals. The interview questions (see Appendix C and Appendix D) for both sessions were structured to solicit subjective data on current training requirements, future training needs, and the difference in the role of BSNCOs in digital and analog units. The group interview sessions were conducted immediately following the administration of the questionnaire with the same NCOs. The individual interview sessions were conducted with the BSNCOs who had been observed performing their jobs in tactical settings.

## Demographics of Participants

Five hundred twenty-two BSNCOs assigned to coordinating and special staff sections from battalion through corps participated in the project.

- The participants ranged in rank from SGT (E5) to SGM (E9) with 73 percent reporting that they were at skill levels 40/50 (E7 through E9) (see Figure 1).
- They ranged in time in service from 5-32 years with an average time in service of 16.5 years.
- Fifty-eight percent were assigned to analog TOCs while 42 percent were assigned to digital TOCs.
- The majority of BSNCOs, both analog (60%) and digital (80%), were in their first TOC assignment and had not previously served in a BSNCO position.
- Two-thirds of the graduates had attended the residence phase of the course at Fort Bliss, Texas or Fort McCoy, Wisconsin, while the remaining one-third had attended the residence phase at one of the Video Tele-Training (VTT) sites (further discussion below).

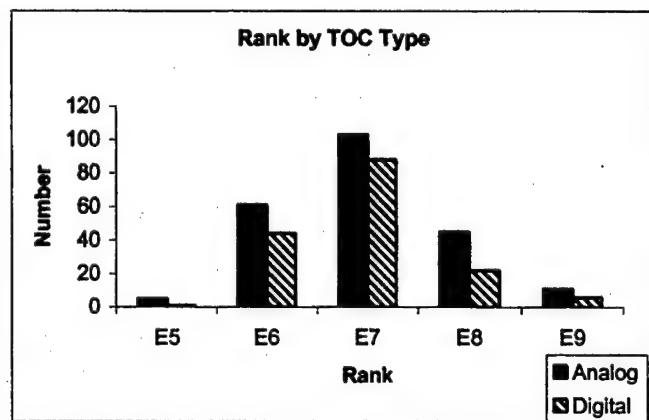


Figure 1. Demographics of participants

## Findings and Discussion

“How does the role of the BSNCO change in the TOC supported by digital technology?”

BSNCOs bring years of training and experience into their position. Recent introduction of the Army Battle Command System (ABCS) into the TOC finds many of these experienced NCOs bemused. A recent research report observed that, “Senior sergeants tended to focus on basic soldier skills like field craft and NBC, and passed off the digital tasks to younger soldiers who were more familiar with them” (Johnson, Leibrecht, Holder, Coffey, & Quinkert, 2002, p. 13). This report further noted that leaders need the show technical competence to “exercise the authority their subordinates expect” (p.13).

The current institutional training course trains BSNCOs to perform as members of a battalion or higher staff in analog TOCs. The BSNCO Course defines the role of the BSNCO as manager of the day-to-day operations of the TOC by performing those duties and tasks inherent to their staff section or functional area of assignment. BSNCOs synchronize all resources within the TOC. BSNCOs use manual methods and techniques to prepare graphics and overlays, write and publish orders, and to display tactical information on charts and status boards. Further, they assist the Battle Captains in discharging their duties. How does this role change with technology? For example, not only can digital systems prepare graphics and overlays and displaying tactical information in almost real time; these systems continuously update this information.

When asked how they would define their role, the BSNCOs in the analog TOC responded largely in terms of setting up the TOC, manning the TOC, monitoring the flow of personnel and supplies, and tracking the battle/updating the map (see Table 1). Approximately half of the BSNCOs in digital TOCs indicate that there is no change in their role. Even with the introduction of the digital systems, they state that they are still performing the same tasks but with a different tool, the computer.

Although about half of the NCOs reported little change in their role in the digital TOC, many others related new challenges in performing their duties. In addition to performing the analog tasks, BSNCOs in TOCs supported by digitization note their responsibility as maintaining/managing the different computer systems and managing the flow of information (see Table 1). With the transformation to digital equipment, the BSNCO must now manage vast amounts of information output from the ABCS within the digital TOC or Command Information Center (CIC). The old manual methods of displaying tactical information through acetate overlays and PowerPoint charts have been replaced. Now, tactical information is projected from the various digital systems onto a Large Screen Display (LSD). Each ABCS system within the CIC is linked through a Proxima projector and controlled by a Touch Pad Controller. At the touch of a button, ABCS screens can be displayed from one to four digital systems at once. Battle Captains and BSNCOs are responsible for operating the Touch Pad Controller. They respond to the commander's requests for information by controlling what is displayed from the

ABCS systems. BSNCOs not only must be technical experts on the digital system that supports their specific functional area, but must have a basic understanding and working knowledge of all systems and how to integrate the systems in order to display the requested information.

When asked to define their role as a BSNCO, the following responses were offered by the various BSNCOs in the analog and digital TOCs (see Table 1):

Table 1.

*Comparison of the role of BSNCOs in analog and digital TOCs*

Analog TOC		Digital TOC	
Percent	Define your role as a BSNCO	Trained on digital systems Percent	<u>NOT</u> trained on digital systems Percent
9	Supervision of TOC operations, insure that the TOC is running smoothly.	13	10
18	Battle tracking	7	9
0	Responsible for digital communications between ABCS equipment. (Connectivity/maintenance)	9	1
0	Ensuring flow of information up and down the chain	6	4
0	Preparing graphics, enemy situation maps, MCOO	5	4
0	Assist staff decision making	4	7
7	INTEL-track/interpret/disseminate	3	7
0	Monitor personnel strength	4	4
0	Digital operator/supervisor	3	4
6	Develop OPORDS, SITTEMP, or EVENT TEMP	2	4
6	Track NBC	4	3
5	Manages supply: track combat trains and supplies	1	6
0	Supervisor/trainer	1	0
7	Conducts replacement, casualty reports	0	0
3	Manages maintenance/recovery operations	0	0
5	Assist staff officers	0	0
1	Plan movement of soldiers	0	0

Eighteen percent of BSNCOs in analog TOCs versus eight percent of BSNCOs in TOCs supported by digitization more often identified tracking the battle and updating maps as a role. This apparent difference could be more a function of this role being an implicit part of many digital TOC tasks (supervision of TOC operations and responsibility for digital communications) rather than the physical overt action of placing symbols on an acetate overlay. Currently the main difference between the analog TOC and the TOC supported by digitization is that the means of executing the role of the

BSNCO is greatly influenced by digitization. In other words, analog tasks are being performed using digital equipment.

The table depicts one striking difference in the perception of the TOC roles between BSNCOs who were trained on digital systems versus those who were not formally trained. The BSNCOs trained on digital systems believed that being responsible for the maintenance and connectivity between elements of the ABCS was a part of their role as BSNCOs in the digital TOC. By contrast, only one of the BSNCOs who was not trained on a digital system and who was assigned to a digital TOC mentioned this as a part of their role.

One questionnaire item was: "Based on my experience as a BSNCO or my observations of the BSNCO, what is the primary difference between their role in the analog and digital TOC." BSNCOs surveyed appear to have two different perspectives on the role of the BSNCO in a digital TOC. Some see the BSNCO as assuming the complex role of information integrator:

- BSNCOs must have the ability to get real-time situational data at anytime without having to track it down. All the data is just a keystroke or button click away.
- BSNCOs must be competent at accomplishing multiple dynamic tasks in a short time span. They identify critical information and update situational awareness at a moment's notice.

Others see that their role is to oversee and maintain the equipment:

- My role as a senior NCO is to be able to understand the digital equipment and be able to have the systems in place and working, to troubleshoot, and to guide operators.
- In digital TOCs, NCOs are more apt to be technicians rather than tacticians.

Responses to the item above were compared to determine if NCOs currently assigned to a digital TOC differed in their answers based on their number of digital TOC assignments. Generally, responses fell into the four categories shown below:

- Note only that digital TOCs have the ABCS
- Revealed advantages of the digital TOC
- State no difference between the two
- Mention disadvantages of the digital TOC

As familiarity with Army digital systems increased (as demonstrated by comparing those NCOs with one versus three assignments in a digital TOC), participants' perception of TOCs incorporating digitization became more supportive (see Table 2). This item was added after data collection began; therefore, the number responding is small. Responses suggest that NCOs familiar with Army digitization have more confidence in this technology.

Table 2.

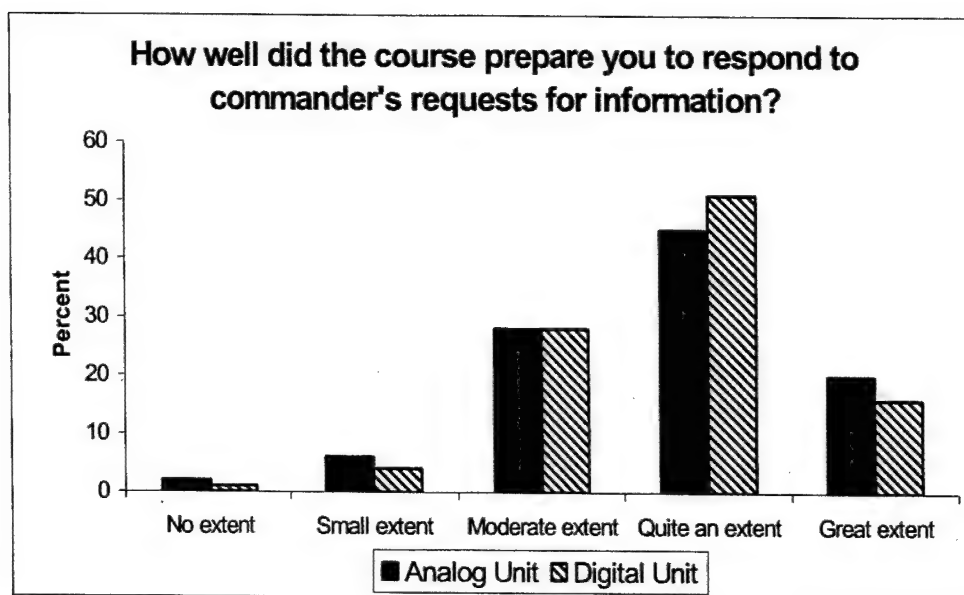
*Perceived differences between analog and digital TOCS from NCOs assigned to one versus three digital units*

	<b>One Assignment N = 33</b>	<b>Three Assignments N = 10</b>
<b>Presence of the ABCS</b>	33 %	50 %
<b>Advantages of ABCS</b>	36 %	50 %
<b>No difference</b>	24 %	0%
<b>Disadvantages of ABCS</b>	6 %	0%

“How effective is the institutional training program in preparing BSNCOs for their duty in analog and digital TOCs?”

The Battle Staff NCO Course (BSNCOC) is the only institutional course offered by the US Army to train NCO staff members how to operate as part of the battalion or higher battle staff. The course is an intense, fast paced, performance-oriented program of instruction (POI) that concentrates on the battle staff duties and responsibilities of the coordinating and special staff sections, regardless of the NCO's functional area assignment. The course consists of two phases. Phase I is a pre-resident training packet, consisting of 12 compact discs which the NCOs study at their home-station over a 60 day period. Normally, the unit loses the NCO for at least half-days over this two-month period while the CDs are studied at the installation MOS Library. Upon completing Phase I, the NCO attends a resident Phase II course. Course length depends on course location. The resident locations offered are Fort McCoy, Wisconsin; the U.S. Army Sergeants Major Academy (USASMA) at Fort Bliss, Texas; and VTT sites certified to receive the BSNCOC instruction at Fort Bragg, North Carolina; Fort Benning, Georgia; Fort Polk, Louisiana; Fort Riley, Kansas; Fort Sill, Oklahoma; Fort Hood, Texas; Schofield Barracks, Hawaii; Vilseck, Germany; and Camp Eagle Base, Bosnia. If the resident location is Fort McCoy, Wisconsin (primarily a reserve training base), Phase II lasts 21 consecutive days. If the resident location is Fort Bliss, Texas, Phase II lasts for 21 academic days. If the resident location is one of the VTT sites, Phase II lasts for 24 academic days to allow for administrative issues connected with a video-tele-training course. There is no differentiation in course content among the three types of resident locations.

When asked how well the BSNCOC prepares you to respond to the commander's request for information, the majority of course graduates responded that the course prepared them effectively to perform their jobs (see Figure 2). Most graduates were completely satisfied with the current course curriculum and were confident that they are well prepared. A battalion commander emphatically stated, “BSNCOs in my unit are very critical to the battalion's mission success and I'm very confident in the current BSNCOC in preparing BSNCOs to do their job.”



*Figure 2. Perceived effectiveness of the BSNCO*

When asked what task taught at the BSNCO has been the most helpful in their current position, the overwhelming response from BSNCOs in both analog and digital units, was graphics and overlays. BSNCOs indicated that graphics and overlays are the one critical task that must be mastered in order to be a successful BSNCO. This supports the fact that battle tracking is the BSNCOs primary responsibility. They monitor, maintain, and update situation maps as the tactical situation changes. This is significant because technology dramatically changes how BSNCOs perform these core responsibilities.

When asked what additional tasks/topics/activities should be included in the BSNCO to better prepare you for your current job, the majority of NCOs in both analog units and units supported by digitization were satisfied with the content of the course. For those who believed content should be added, the number one response for what additional tasks/topics/activities was training of digital systems (See Table 3). Additionally, NCOs in both analog and digital TOCs had a few requests for additional training in areas such as: Battle Tracking, Military Decision Making Process (MDMP), Intelligence Preparation of the Battlefield (IPB), and Plans & Operations Orders (OPLAN/OPORD).



Table 3.

*Comparison of responses between analog and digital TOC BSNCOs on additional tasks that should be included in the BSNCO*

	Nothing needs to be added	Include training of digital systems
BSNCOs in digital TOC	55 %	31 %
BSNCOs in analog TOC	64 %	9 %

A major responsibility of BSNCOs is supervision of subordinates. When BSNCOs assigned to digital TOCs were asked how well the BSNCO prepared you to lead/train/supervise soldiers who operate digital systems, the majority of BSNCOs (55 percent) responded that the course prepared them to no extent or to a small extent (see Figure 3). This is not surprising because the course minimally addresses operation of digital systems. Responses do highlight BSNCOs' uneasiness when leading subordinates whose jobs they do not thoroughly understand.

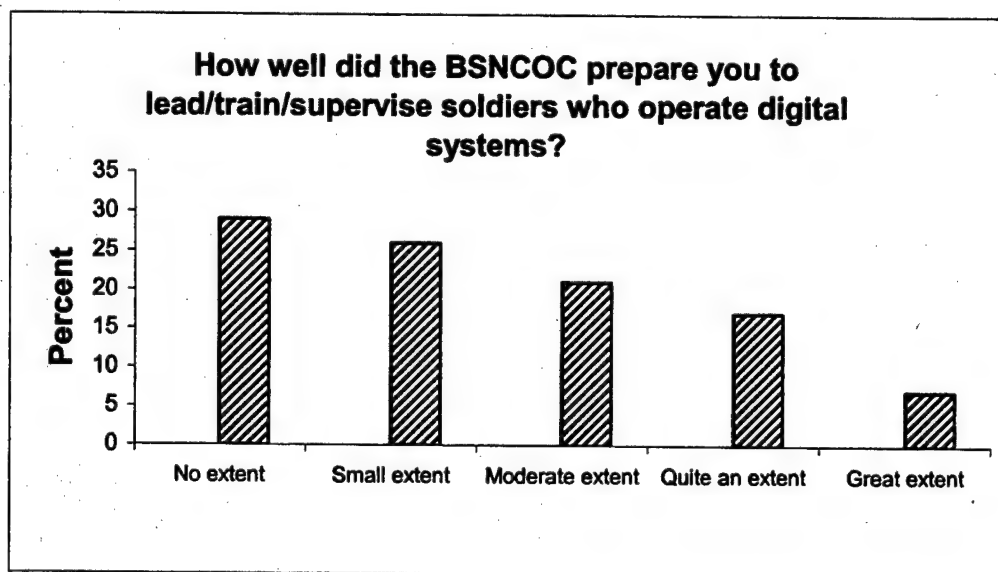


Figure 3. Perceived effectiveness of BSNCO training for digital TOCs

During the resident Phase II BSNCO, an introduction to ABCS is given. The block of instruction is an overview of the ABCS capabilities. Again, BSNCOs indicated that it would be beneficial to their job performance in a digital TOC if they received detailed training on the ABCS systems during the BSNCO. They want the training to be to a level of proficiency that empowers them to supervise and train their soldiers. Research suggests that developing this level of proficiency is beyond the resources of any



single course (Schaab & Moses, 2001; Johnson et al., 2002), as it requires continuous and progressive training over a wide variety of situations.

Additionally, BSNCOs expressed a desire for training on the system pertaining to their individual MOS (e.g., Military Intelligence NCOs attend ASAS training). They also believe that the current analog tasks taught are foundational, transferable and useable on the digital systems. For example, an NCO stated during a group interview in a digital unit, "If you don't know the basics of graphics and overlays, you will have a very difficult time understanding MCS graphics." The group agreed.

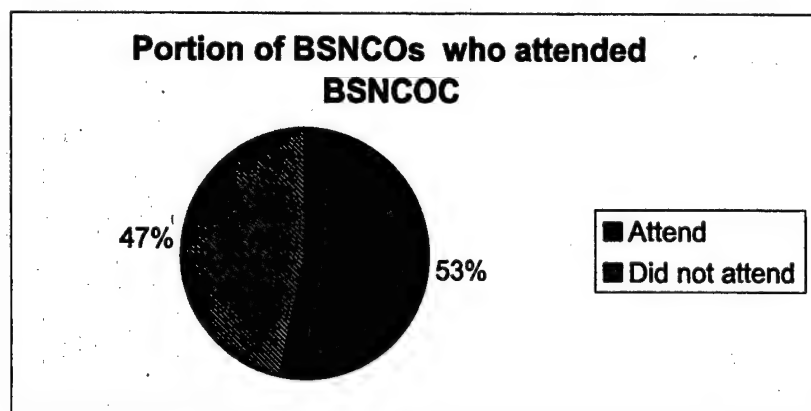
In spite of the fact that the resident Phase II Course curriculum is the same regardless of location (Forts Bliss, Texas & McCoy, Wisconsin vs. VVT Sites), many NCOs who had attended the resident course via video-teleconferencing **perceived** that the VTT training was not as effective. This is consistent with past research findings. Soldiers report that they prefer the resident course to the VTT. However, research has shown that there was no significant difference between resident and VTT graduates in their ability to do the job, as viewed by their supervisors (Wisher, Champagne, Pawluk, Eaton, & Thornton, 1999). The reasons given for preferring the resident course by the NCOs in this study were as follows: (1) The NCOs perceive that the Forts Bliss/McCoy BSNCOs receive instruction on more topics and that the instruction is more in depth than that of the VTT sites. (2) Resident courses have certified instructors assigned to classrooms, who are present at all times (lecture as well as practical exercises), while most VTT resident sites have assistant instructors (AI) who are recent course graduates. (In fact, a certified BSNCO instructor does present all formal blocks of instructions via the video-teleconference. During practical exercises, should questions arise that the AI cannot answer, the instructor is contacted by telephone and immediately comes on line.) (3) NCOs attending Phase II via the VTT sites are normally doing so at their home station. Therefore, some still have unit requirements such as accountability formations and unit physical training, while attending the course. Some NCO's dedication to duty compels them to continue some of their unit responsibilities. A SFC BSNCO Phase II student at Fort Hood, TX stated, "While you are attending the VTT course, you can't totally focus on your course work because you know that the unit can still reach out and touch you when they want to, and they often do."

In summary, the consensus among BSNCOs was that the BSNCO Course is highly effective. However, for those in digital positions, the course did lack vital digital training. Although NCOs prefer the resident course, research shows that both forms of training are equally effective.

Unfortunately, a finding incidental to this study was that many NCOs in authorized battle staff NCO positions are not attending the BSNCO as they should. This issue is discussed below.

**“Are NCOs assigned to BSNCO positions school trained to perform their duties?”**

Of the 522 BSNCOs assigned to authorized BSNCO positions, only 53 percent were BSNCO Course graduates (see Figure 4). On average, there are five authorized BSNCO positions per brigade and/or battalion staff; these are the Personnel NCO, Intelligence NCO, Operations NCO, Logistics NCO, and Nuclear, Biological, and Chemical (NBC) NCO. There were several units with no BSNCO Course graduates. Although the finding was not an objective of the study, it is significant because the lack of school qualified NCOs can adversely affect the performance of battle staffs. There are several contributing factors for NCOs not attending the course. These factors are perceptions reported by NCOs and warrant further investigation.



*Figure 4.* Course attendees assigned to BSNCO positions compared to non-attendees

The command leadership in some units is convinced that the unit's operational pace precludes them from allowing senior NCOs to be away from the unit for extended periods. One battalion CSM commented, "I can't afford to send senior NCOs to the BSNCO after they are assigned to this unit. The unit's operational tempo (OPTEMPO) is too high to lose a senior NCO for three months because they are too critical to the day-to-day operation. U.S. Army Personnel Command (PERSCOM) should ensure that NCOs projected for BSNCO slots attend the course enroute to their new duty station." This belief reverberated in the units with a low number of BSNCO graduates.

Contributing to low attendance is a belief within the NCO Corps that when an NCO acquires the BSNCO Additional Skill Identifier (ASI), he/she will become a career staff NCO, thus drastically decreasing their opportunity for promotion. BSNCOs surveyed are convinced that assignments in troop leadership positions get you promoted, while assignments away from troops, especially staff positions, render NCOs non-competitive. An E7 Operations Sergeant stated, "I will never attend the BSNCO because if I get the ASI, I will be assigned to subsequent staff positions away from troops and I won't be competitive for promotions." PERSCOM could determine if soldiers serving in repeat BSNCO positions do worse than others do. This would either dispel a current misperception or identify a real concern.

Another factor contributing to low attendance is that the unit leadership, unit school personnel, and eligible NCOs do not understand the BSNCO enrollment process. When unit personnel were asked why NCOs are not being scheduled to attend the BSNCO, the answer given most often was, "We haven't received a school quota for a very long time." The misconception is that BSNCO quotas are allocated from the Major Command (MACOM) down to units. Consequently, units are waiting for quotas instead of requesting available school slots. To attend BSNCO, the NCO's unit simply requests attendance through its MACOM, and subsequently PERSCOM schedules them for the course.

BSNCOs who have attended the course are adamant that it is imperative that NCOs attend the BSNCO prior to assignment or shortly after assignment to a BSNCO position. They believe the institutional training is extremely critical for successful job performance and that it is overwhelming for NCOs to have to learn all the required tasks inherent to a BSNCO job by on-the-job training (OJT). They further believe that the lack of institutional knowledge sometimes leads to officers having a lack of confidence in their ability, thus not fully utilizing them in TOC operations.

**"When, where, and how do BSNCOs obtain training on digital systems?"**

During BSNCO resident Phase II, students receive "An Introduction to the Army Battle Command System." Due to time and funding limitations, this informational brief on the ABCS and the components that comprise the system does not include instruction on how to operate digital systems but merely introduces BSNCOs to the systems' capabilities. Therefore, BSNCOs arrive in their unit with little or no digital skills. Not only are they expected to perform the role of a BSNCO, but they are also expected to operate and supervise the operators of digital systems. This creates a real dilemma for the BSNCOs. So the questions arise as to where they should obtain the digital training, and when they should receive it.

A possible solution to these shortfalls is the Institutional Digital Educational Plan (IDEP), TRADOC's plan for "developing trained and ready operators, integrators, and decision makers to units in the field" (FY03 Commander's Curriculum Guidance). To date, IDEP has been largely unfunded by Headquarters, Department of the Army.

Currently, as the new digital systems are fielded to units, operators receive New Equipment Training (NET). During NET, the focus for units is to train primary operators. Although in some units the primary operators are BSNCOs, in most units they are junior enlisted soldiers. Because of the limited number of seats in the training courses, units usually give priority to the primary operators. Because NCOs are not the primary operators but are supervisors, the junior enlisted soldiers attend the training first. In some units, the NCO never receives formal digital training.

When NCOs assigned to digital units were asked what level of digital competence the BSNCO demonstrates in digital TOCs, based on their experience as a BSNCO or

their observations of the BSNCO in the digital TOC, the majority responded that BSNCOs have a very limited knowledge of how to operate the digital systems. However, most BSNCOs agreed that they should have a high level of competence.

Only about half the BSNCOs who use a digital system have been formally trained on that system (see Figure 5). The majority of those trained attended a 1-2 week operator level NET. Others attended NET DELTA (changes to system due to software upgrades) and, in a very few cases, Advanced Individual Training (AIT).

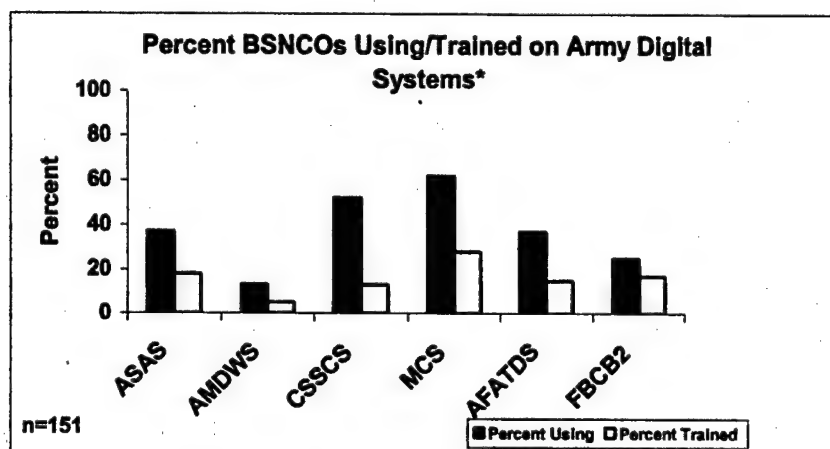


Figure 5. Percentage of BSNCOs using digital systems versus those trained

For those BSNCOs who do attend formal digital training (e.g., NET), most of them attend the formal training after arrival in the unit, after assignment to a BSNCO position, and after graduation from the BSNCO.

BSNCOs who do not have formal digital training get their technical digital skills through OJT. They receive the training during Sergeant's Time Training, field training exercises, and other command post exercises. Since the junior enlisted operators are school trained, BSNCOs rely on them for the training, causing a reversal of traditional Army roles. These NCOs feel disadvantaged due to the lack of formal digital training since they are supposed to be the technical experts, vice their junior enlisted counterparts. A cavalry battalion commander who emphasizes that his leaders attend training stated, "BSNCOs are critical to the success of this TOC. It is imperative that they are digitally proficient. My NCOs are getting better now that they are attending the training courses."

BSNCOs indicate that an obstacle in mastering digital system operations is the lack of basic computer skills. When they begin digital system training, many do not possess even the basic skills such as keyboarding (typing), mouse manipulation, and navigating windows and menus. They also indicate frustration in their inability to troubleshoot their own systems when failures occur, because NCOs are accustomed to

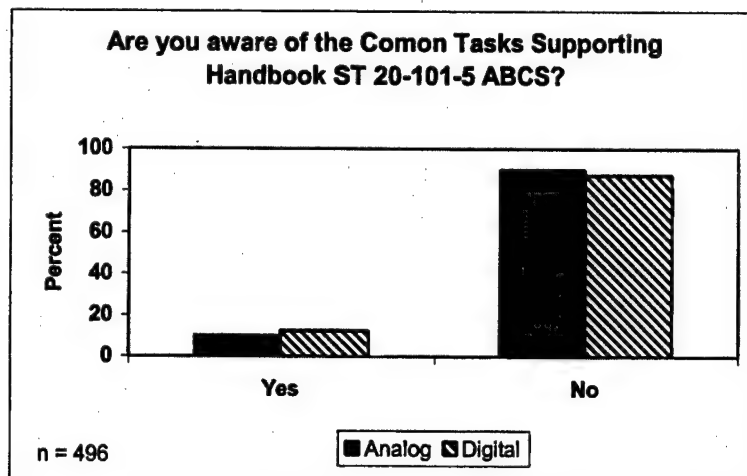
being able to repair their own equipment. Numerous negative comments referenced having to wait on civilian contractors to troubleshoot and repair system failures.

When asked whether it would be beneficial to BSNCO job performance in the digital TOC if digital systems were taught at the BSNCO Course, 88 percent of BSNCOs assigned to digital TOCs responded that it would be. BSNCOs believe the digital training should be to a level of proficiency that provides them with the necessary digital skills to train their soldiers, which they believe is operator level training. When asked to select the best way to become proficient in using a digital system, the third highest response behind NET and unit OJT was to integrate digital system training into the BSNCO Course.

### **“What tasks are BSNCOs performing in analog and digital TOCs?”**

During observations, BSNCOs in analog TOCs performed to standard those tasks/subjects that are taught at the course (see Appendix A). They were observed battle tracking by maintaining and updating situation maps (graphics and overlays), preparing operational reports (plans, orders, and annexes), and briefing their functional area during battle updates and shift change briefings (military briefings). Course graduates were competent and confident performing in their role. A cavalry battalion commander said, “BSNCOs at battalion level are critical to mission success, especially during dual missions. NCOs must do the initial planning when the unit receives a change of mission.”

BSNCOs in digital units were performing tasks that are not taught at the BSNCO Course. The digital tasks performed on the various ABCS systems are published in a handbook ST 20-101-5-ABCS developed by Warrior-T (see Appendix E), the training development integrator at Fort Hood, TX. The student textbook (ST) is a combined list of tasks for the current ABCS software. The handbook lists, by staff sections and system, tasks and procedures required to employ the digital systems. This document can be downloaded from the Warrior-T website at [www.warrior-t.army.mil](http://www.warrior-t.army.mil) or from the Reimer Digital Library at <http://www.adtdl.army.mil/> in *Mission Training Plans (SBCT)*. Although BSNCO operators were performing tasks outlined in the aforementioned document, only 12 percent responded on the questionnaire that they were aware of it and of those, only seven individuals used it as a training tool (see Figure 6).



*Figure 6. Comparison of NCOs aware of ST 20-101-5-ABCS*

### **Recommendations**

Technology and the advantages it affords are changing the role of a vital figure, the BSNCO. An experienced NCO, newly assigned to a digital TOC, said, "I don't have anything to do. I don't know why I'm here." This thwarted NCO highlights both the need and opportunity for the Army to redefine the role of the BSNCO to take advantage of the way that technology alters the character of how we fight. Findings from this report, coupled with information such as the *Army Battle Command System (ABCS) 6.2 Battle Staff Tasks*, can assist decision makers in defining how the BSNCO will meet the Army's needs in the 21<sup>st</sup> century.

Based upon surveying over 500 BSNCOs and interviewing almost 300 of these personnel, either individually or in small groups, the following recommendations address what BSNCOs perceive as shortfalls in the current system.

#### **Battle Staff NCO Course**

BSNCOs give the BSNCO Course consistently high marks for preparing them to meet established responsibilities of managing the TOC and aiding the TOC commander. Concerns occur when these NCOs are assigned to TOCs supported by Army digital systems. Input from NCOs helps identify reasons for disconnects between what currently is taught and how technology changes what the NCO needs to know. At a more basic level, understanding how technology changes traditional responsibilities of the BSNCO and envisioning how to maximize these NCOs' knowledge and experience is a challenge for the transforming Army.

Below are recommendations to assist the BSNCO in gaining additional support for his or her position in digital TOCs.



- Include an executive overview of the ABCS to familiarize all BSNCOs with their capabilities. NCOs should receive an introduction to all of the systems in the ABCS, including: identifying analog tasks now performed digitally, describing how these systems interact, and understanding advantages of the ABCS. This information is available in electronic format.
- Incorporate digital training within existing blocks of instruction (i.e., teach Maneuver Control System (MCS) graphics during graphics and overlays) for more effective, efficient, and meaningful instruction (Schaab & Dressel, 2001). Trainers of Military Intelligence Analysts have very successfully integrated training on digital systems during the first week of Advanced Individual Training for entry-level soldiers. Informal feedback from these soldiers' sergeants suggests that this type of training improves soldiers' level of competency. A major challenge in incorporating digital training within existing instruction is instructors must understand the technology.
- Make available training on the MCS and the Force XXI Battle Command Brigade and Below (FBCB2). MCS was reported as the most widely used system by BSNCOs in this study. MCS (used by battalion and above) capabilities include the ability to provide the common operating picture, develop and distribute plans and orders, conduct collaborative planning, and support resource management. These are fundamental BSNCO responsibilities. FBCB2 provides horizontal and vertical integration of information to leaders at brigade and below, so its use is widespread.
- Stress the importance of system training for NCOs on the equipment that they use. Operator training is not just for lower enlisted personnel.
- Provide additional instruction on the Military Decision Making Process and developing plans/orders/annexes. NCOs found these areas very beneficial and some requested focusing more time on these topics.

### **Training opportunities for NCOs assigned to BSNCO positions**

A finding of this study was that a large proportion (47 percent) of NCOs in the BSNCO position were not BSNCO Course graduates. Although not a stated objective of this study, this situation needs to be addressed. During the interviews, BSNCOs offered many recommendations to enhance opportunities for training BSNCOs.

- Allow NCOs projected for BSNCO positions to attend the BSNCO Course enroute to a new unit during a permanent change of station.
- Within units, schedule NCOs to attend the BSNCO Course when they are projected for or shortly after assignment to a BSNCO position.

- Educate unit leadership, unit schools' personnel, and the NCO Corps on the BSNCO enrollment procedures.
- Query PERSCOM to determine if soldiers serving in repeat BSNCO positions do worse on promotion boards than others. Educate the NCO Corps on the centralized promotion system to dispel any misconception regarding BSNCOs' advancement.
- Integrate battle staff NCO tasks into the Non-Commissioned Officer Education System (NCOES) starting at the Basic Non-Commissioned Officer Course.
- Allow Sergeants (E5) to attend the BSNCO. Currently, only E6 and above are eligible to attend.
- Develop utilization strategies that will facilitate subsequent assignments to BSNCO positions.
- Enforce the current 12-month stabilization requirement and consider increasing the requirement to 18-24 months.

#### **Digital training for BSNCOs**

To improve digital expertise of BSNCOs, provide multiple means for BSNCOs to acquire training on Army digital systems. Interviews with the BSNCOs resulted in a variety of means to improve BSNCOs' digital expertise.

- Allow newly arriving NCOs to attend local digital training courses during installation in-processing before arrival at the unit.
- Integrate digital systems training in the NCOES.
- Authorize Master Digital trainers (an expert on all digital systems) on digital unit MTOEs to provide the necessary digital expertise to include operator training, unit sustainment training, and equipment maintenance.
- Develop computer-based training or on-line distant learning courses for the ABCS systems.
- Require BSNCOs to attend battle staff system integration training courses.
- Include training on digital system troubleshooting techniques and procedures.
- Educate units to use ST 20-101-5-ABCS as a digital training tool.



## **Conclusions**

As the Army continues the transformation process toward the Objective Force and digitization progresses, more and more units will become digitally equipped. The digitization will alter the management of TOCs. To gain maximum benefit from the new technology and keep pace with the tremendous increase in flow of information, it is essential for BSNCOs to acquire and maintain those digital skills necessary to be technically proficient.

The Battle Staff NCO Course is an excellent course that prepares BSNCOs to function as effective members of analog battle staffs. To continue as a viable course that produces the quality of BSNCOs needed in the future, it must transform along with the force. For example, several training centers successfully integrate the analog and digital training (e.g., learn graphics simultaneously in the analog and digital mode) for more efficient and effective training. Of course, this requires instructors to be knowledgeable in both areas. Many training facilities are taking advantage of technology to provide web-based support in the form of pre-training familiarization to maximize the training experiences and post-training review to support sustainment. The BSNCO course should investigate ways to efficiently support digital systems' training for NCOs who must employ the systems in an integrated environment.

The Army will not be able to depend solely on the institutional course to train its BSNCOs to exploit the digital systems' capabilities. Units must prepare to meet the digital training challenges with operator and sustainment training conducted by digital experts.

The role of the BSNCO has changed with the introduction of high-tech, advanced technology. Even as trained digital operators, BSNCOs are no longer only specialists primarily concerned with one functional area. They are now multifunctional information managers who use all the ABCS systems in an integrated manner to effectively respond to commanders' requests for information (Lynch, 2001).



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## Appendix A

### Battle Staff NCO Course Curriculum

<b>PHASE</b>	<b>LESSON TITLE</b>
I	Army Operations
I	The Division
I	C2 Process
I	C2 Facilities
I	Offensive Operations
I	Rear Operations
I	Combat Support Operations
I	Other tactical Operations
I	Plans, Orders, and Annexes
I	Graphics and Overlays
I	NBC Operations
I	Introduction to Intelligence Operations
I	Intelligence Preparation of the Battlefield
I	Intelligence Collection
I	Intelligence Dissemination
I	Combat Fire Support
I	Combat Service Support Operations
I	Maintenance Operations
I	Personnel Services Operations
I	Field Services
I	Military Briefings
II	Small Group Process
II	Military Briefings
II	Army Operations
II	Command and Staff
II	Command and Control Process
II	Plans, Orders, and Annexes
II	Graphics and Overlays
II	Intelligence Preparation of the Battlefield
II	Intelligence Collection
II	Intelligence Processing
II	Intelligence Dissemination
II	Supply Support Operations
II	Transportation/Tactical Movement
II	Reconstitution
II	Introduction to ABCS
II	Information Operations
II	Fratricide
II	Record Keeping
II	Risk Management

## Appendix B

### Battle Staff NCO (BSNCO) Training Requirement Questionnaire

Name \_\_\_\_\_ Rank: \_\_\_\_\_ Last 4 digits of SSN: \_\_\_\_\_

MOS/skill level: \_\_\_\_\_ Secondary MOS/skill level: \_\_\_\_\_ Unit/MSC \_\_\_\_\_

Time in Service: \_\_\_\_\_ Current Duty Position: Pers, Intel, Ops, Log, NBC, other \_\_\_\_\_

BSNCOC Graduation Date: \_\_\_\_\_ Type BSNCOC Attended: Residence or VTT

Current TOC Type: Analog (without digital systems) or Digital (circle one)

TOC Experience:

#### Analog (without digital systems)

Position Held	From (month/year)	To (month/year)	Unit/Location

#### Digital

Position Held	From (month/year)	To (month/year)	Unit/Location

#### 1. How long have you been in your current position?

- ☐ Less than 6 months  
☐ 6-12 months  
☐ 12-24 months  
☐ more than 24 months

#### 2. Did you attend the Battle Staff NCO Course (BSNCOC) before or after assignment to your current position?

- ☐ Before  
☐ After

3. How well did the BSNCOB prepare you to respond to commander's requests for information?  
(circle one)

☐ To no extent      ☐ To a small extent      ☐ To a moderate extent      ☐ To quite an extent      ☐ To a great extent

4. What additional tasks/topics/duties should be included in the BSNCOB to better prepare you for your current job?

5. What tasks/duties taught at the BSNCOB have been the most helpful in your current position?

6. What tasks/duties taught at the BSNCOB could be eliminated?

7. Were you trained on your digital system before or after attending the BSNCOB?

☐ Before  
☐ After

8. How well did the BSNCOB prepare you to lead/train/supervise soldiers who operate digital systems? (circle one)

☐ To no extent      ☐ To a small extent      ☐ To a moderate extent      ☐ To quite an extent      ☐ To a great extent

9. If you are assigned to a digital TOC, which system of the Army Battle Command System (ABCS) are you operating? (CHECK ONE)

☐ ASAS, ☐ AMDWS, ☐ CSSCS, ☐ MCS, ☐ AFATDS, ☐ FBCB2  
☐ Other, Describe \_\_\_\_\_

10. Where did you receive the **FORMAL** training on your digital system? (CHECK ONE)

- ☐ AIT
- ☐ NET Training (How to use the system.)
- ☐ NET Delta Training (Changes to the system due to upgrade.)
- ☐ CD ROM introductory/refresher training or on-line training
- ☐ Systems Integration Training
- ☐ Other. Describe \_\_\_\_\_
- ☐ No Formal Training

11. When did you receive the **FORMAL** training on your digital system? (CHECK ONE)

- ☐ Enroute to digital unit
- ☐ After arrival to unit, before assignment to current position
- ☐ After arrival to unit, after assignment to current position
- ☐ N/A, no formal training

12. How long was the **FORMAL** training on your digital system? (CHECK ONE)

- ☐ 1-2 weeks
- ☐ 3-4 weeks
- ☐ 5-6 weeks
- ☐ 7-8 weeks
- ☐ N/A, no formal training

13. In addition to any **FORMAL** training (NET, schoolhouse) on the ABCS, how did you learn to operate systems within the ABCS?

14. For you, the **BEST** way to become proficient in using your digital system as a tool to do your job would be: (list your first choice as "1" AND check all others that apply)

- ☐ NET Training
- ☐ Integrate the systems into BSNCOB
- ☐ Unit OJT
- ☐ Exploring the system on my own, using good training aids/manuals
- ☐ Using the systems in the field exercises

15. Would it be beneficial to your job performance in the digital TOC for the digital system be taught at the BSNCOB?

- ☐ Yes
- ☐ No

**16. Training on the ABCS systems in the BSNCO should consist of (list your first choice as "1" AND check all others that apply):**

- ☐ A brief overview of the benefits of the system
- ☐ A familiarization with the system that I will be using
- ☐ A basic understanding of the functionality of my system
- ☐ A level of proficiency where I can supervise/train my soldiers
- ☐ Should not be taught in the BSNCO

**17. To maintain proficiency on my digital system, I need to train: (SELECT ONE)**

- ☐ Weekly for \_\_\_\_\_ hours
- ☐ Bi-weekly for \_\_\_\_\_ hours
- ☐ Monthly for \_\_\_\_\_ hours
- ☐ Quarterly for \_\_\_\_\_ hours

**18. Who are the primary operators of the digital systems in the TOC?**

**Explain the role of the personnel who operate the digital systems in the TOC. For example, who updates the system? Who troubleshoots when the system is down? Who determines when/what messages are sent forward?**

**19. Based on my experience as a BSNCO or my observations of the BSNCO in the digital TOC: Which best describes the BSNCO:**

- ☐ no or very limited knowledge of how to operate the ABCS components
- ☐ familiarity with what the ABCS adds to the TOC
- ☐ operates the ABCS system(s) but others in the TOC are more proficient
- ☐ proficient at operating ABCS and can supervise/train others
- ☐ no experience in a digital TOC
- ☐ other. Please explain: \_\_\_\_\_



**20. Based on my experience (any position) in the digital TOC: The BSNCO should:**

- ☐ depend on others to operate/interpret the ABCS and concentrate on other duties in the TOC.
- ☐ have some familiarity with what the ABCS provides in the TOC.
- ☐ have a basic understanding of the ABCS and be able to use the systems if others are not available.
- ☐ have a high level of competence in operating the ABCS and able to monitor, train, and troubleshoot the system.
- ☐ no experience in a digital TOC.
- ☐ other. Please explain: \_\_\_\_\_

**21. Based on my experience as a BSNCO or my observations of the BSNCO, the primary differences between the role of the BSNCO in the analog and digital TOC are:**

**22. Define your role as a BSNCO (what jobs/tasks do I perform? What is my duty description?).**

**23. Are you aware of the Battle Staff NCOs Common Tasks Supporting Handbook, ST 20-101-5-ABCS, published by Warrior-T?**

- ☐ Yes
- ☐ No

**24. Do you use ST 20-101-5-ABCS as a training aide in your sustainment training program?**

- ☐ Yes
- ☐ No

**25. Is there anything else you'd like to express about the differences and requirements for a BSNCO in a digital TOC?**

## Battle Staff NCO Training Requirement Group Interview/Discussion

**1. If you did not receive formal training on your digital systems, how and where did you learn how to operate your digital system?**

- C-1

- 3. If you are assigned to a digital TOC, what are some of the new KSAs you had to acquire to function effectively in a digital TOC?**
- 4. If you are not school trained, what specific tasks did you have to learn to be effective in your BSNCO position?**
- 5. When should a NCO attend the BSNCO?**
- 6. How has the BSNCO role changed from operating in an analog TOC to operating in a digital TOC?**
- 7. What should be the stabilization requirement for BSNCOs after graduation?**

**8. Are BSNCOs being properly utilized in your unit?**

**9. What would you change to take better advantage of your years of experience?**

Appendix D

**Battle Staff NCO Training Requirement  
Individual Interview/Discussion**

Name \_\_\_\_\_ Rank: \_\_\_\_\_ Last 4 digits of SSN: \_\_\_\_\_

MOS/skill level: \_\_\_\_\_ Secondary MOS/skill level: \_\_\_\_\_ MSC \_\_\_\_\_

Time in Service: \_\_\_\_\_ Current Duty Position: Pers, Intel, Ops, Log, NBC, Other \_\_\_\_\_

BSNCOC Graduation Date: \_\_\_\_\_ Type BSNCOC Attended: Residence or VTT

Current Type Of TOC: Analog or Digital (circle one)

**DISCUSSION**

**1. How long have you been in your current BSNCOC position?**

- \_\_\_\_\_ Less than 6 months
- \_\_\_\_\_ 6-12 months
- \_\_\_\_\_ 12-24 months
- \_\_\_\_\_ more than 24 months

**2. How would you define your role as a BSNCOC in your current TOC?**

**3. Future digital systems will require new skills, a wider range of skills, and broader responsibility. How could BSNCOs acquire the new Knowledge, Skills, and Abilities (KSA)? Making the BSNCOC longer is probably not the answer. Outside the institutional school environment, what are other alternatives in which BSNCOs can acquire the new KSAs?**

**4. If you are assigned to a digital TOC, what are some of the new KSAs you had to acquire to function effectively in a digital TOC?**

**5. What would you change to take better advantage of your years of experience?**

## Appendix E

### ST-20-101-5 ABCS ABCS Digital Tasks

<b>Task ID</b>	<b>Task Title</b>
03-4-5120.03-WT20	Transfer Command and Control (C2) Functions During Displacement (Chemical Section)
03-4-5160.03-WT20	Display the Common Operational Picture (COP) (Chemical Section)
03-4-5220.03-WT20	Assess Tactical Situation and Operations (Battle Tracking) (Chemical Section)
03-4-5221.03-WT20	Process NBC Reports
03-4-5222.03-WT20	Prepare Contamination Predictions
03-4-5223.03-WT20	Recommend Operational Exposure Guidance
03-4-5230.03-WT20	Plan Intelligence, Surveillance, and Reconnaissance (ISR) (Chemical Section)
03-4-5310.03-WT20	Describe the Battlefield's Effects (IPB) (Chemical Section)
03-4-5320.03-WT20	Evaluate the NBC Threat (IPB) (Chemical Section)
03-4-5330.03-WT20	Determine Threat NBC Courses of Action (COAs) (IPB) (Chemical Section)
03-4-5350.03-WT20	Receive the Mission (MDMP) (Chemical Section)
03-4-5360.03-WT20	Conduct Mission Analysis (MDMP) (Chemical Section)
03-4-5410.03-WT20	Develop Courses of Action (COAs) (MDMP) (Chemical Section)
03-4-5420.03-WT20	Analyze Courses of Action (COAs) (MDMP) (Chemical Section)
03-4-5430.03-WT20	Compare Courses of Action (COAs) (MDMP) (Chemical Section)
03-4-5450.03-WT20	Produce Order or Plans (MDMP) (Chemical Section)
03-4-5451.03-WT20	Coordinate With Staffs On NBC Related Issues
03-4-5452.03-WT20	Plan Chemical Unit Employment
03-4-5500.03-WT20	Conduct Rehearsals (Chemical Section)
03-4-5600.03-WT20	Synchronize NBC Operations
03-4-5601.03-WT20	Coordinate Chemical/Biological Survey/Sampling Operations
03-4-5602.03-WT20	Coordinate Radiological Survey Operations
05-6-5120.05-WT11	Transfer Command and Control (C2) Functions During Displacement (Engineer Section) (Ver 6.2.x)
05-6-5140.05-WT10	Establish the Warfighter Information Network (WIN) (Engineer Section)
05-6-5160.05-WT11	Display the Common Operational Picture (COP) (Engineer Section)
05-6-5220.71-WT11	Assess Tactical Situation and Operations (Battle Tracking) (Engineer Section)
05-6-5230.05WT10	Plan Intelligence, Surveillance, and Reconnaissance (ISR) (Engineer Section)
05-6-5300.05-WT11	Define the Battlefield Environment (IPB) (Engineer Section)
05-6-5310.05-WT11	Describe the Battlefield's Effects (IPB) (Engineer Section)
05-6-5320.20-WT11	Evaluate the Threat (IPB) (Engineer Section)
05-6-5330.05-WT11	Determine Threat Courses of Action (COAs) (IPB) (Engineer Section)
05-6-5340.05-WT11	Decide Surface Targets to Attack (Engineer Section)

<b>Task ID</b>	<b>Task Title</b>
05-6-5350.05-WT11	Receive the Mission (MDMP) (Engineer Section)
05-6-5360.05-WT11	Conduct Mission Analysis (MDMP) (Engineer Section)
05-6-5410.05-WT11	Develop Courses of Action (COAs) (MDMP) (Engineer Section)
05-6-5420.05-WT10	Analyze Courses of Action (COAs) (MDMP) (Engineer Section)
05-6-5430.05-WT10	Compare Courses of Action (COAs) (MDMP) (Engineer Section)
05-6-5450.05-WT10	Produce Order or Plans (MDMP) (Engineer Section)
05-6-5600.05-WT11	Synchronize Operations (Engineer Section)
06-6-5120.06-WT08	Transfer Command and Control (C2) Functions During Displacement (FSE)
06-6-5130.06-WT08	Establish the Fire Support Element
06-6-5140.06-WT08	Establish the Warfighter Information Network (WIN) (FSE)
06-6-5160.06-WT08	Display the Common Operational Picture (COP) (FSE)
06-6-5220.06-WT08	Assess Tactical Situation and Operations (Battle Tracking) (FSE)
06-6-5230.06-WT08	Plan Intelligence, Surveillance, and Reconnaissance (ISR) Operations (FSE)
06-6-5300.06-WT08	Define the Battlefield Environment (IPB) (FSE)
06-6-5310.06-WT08	Describe the Battlefield's Effects on Fire Support Assets (IPB) (FSE)
06-6-5320.06-WT08	Evaluate the Fire Support Threat (IPB) (FSE)
06-6-5330.06-WT08	Determine Threat Fire Support Courses of Action (COAs) (IPB) (FSE)
06-6-5340.06-WT08	Decide Surface Targets to Attack (FSE)
06-6-5341.06-WT08	Detect Surface Targets to Attack (FSE)
06-6-5342.06-WT08	Employ Fires to Influence the Will, Destroy, Neutralize, or Suppress Enemy Forces (FSE)
06-6-5350.06-WT08	Receive the Mission (MDMP) (FSE)
06-6-5360.06-WT08	Conduct Mission Analysis (MDMP) (FSE)
06-6-5410.06-WT08	Develop Courses of Action (COAs) (MDMP) (FSE)
06-6-5420.06-WT08	Analyze Courses of Action (COAs) (MDMP) (FSE)
06-6-5430.06-WT08	Compare Courses of Action (COAs) (MDMP) (FSE)
06-6-5450.06-WT08	Produce Order or Plans (MDMP) (FSE)
06-6-5500.06-WT08	Conduct Rehearsals (FSE)
06-6-5600.06-WT08	Synchronize Fire Support
08-6-5220.08WT10	Assess Tactical Situation and Operations (Battle Tracking) (Surgeon)
08-6-5221.08WT10	Develop Staff Estimate (Surgeon)
08-6-5360.08WT10	Conduct Mission Analysis (MDMP) (Surgeon)
08-6-5410.08WT10	Develop Courses of Action (COAs) (MDMP) (Surgeon)
08-6-5420.08WT10	Analyze Courses of Action (COAs) (MDMP) (Surgeon)
08-6-5450.08WT10	Produce Order or Plans (MDMP) (Surgeon)
08-6-5600.08WT10	Monitor the Health of the Command (Surgeon)
08-6-5601.08WT10	Conduct Section Activities (Surgeon)
11-4-1161	Plan Intelligence, Surveillance, and Reconnaissance (ISR) Operations (S6)
11-4-1162	Define the Battlefield Environment (IPB) (S6)



<b>Task ID</b>	<b>Task Title</b>
11-4-1163	Describe the Battlefield's Effects (IPB) (S6)
11-4-1164	Evaluate the Threat (IPB) (S6)
11-4-1165	Determine Threat Courses of Action (COAs) (IPB) (S6)
11-4-7161	Establish Command Post (CP) Operations (S6)
11-4-7162	Establish the Command Post (CP) Warfighter Information Network (WIN) (S6)
11-4-7164	Transfer Command and Control (C2) Functions During Displacement (S6)
11-4-7362	Assess Tactical Situation and Operations (Battle Tracking) (S6)
11-4-7461	Receive the Mission (MDMP) (S6)
11-4-7462	Conduct Mission Analysis (MDMP) (S6)
11-4-7463	Develop Courses of Action (COAs) (MDMP) (S6)
11-4-7464	Analyze Courses of Action (COAs) (MDMP) (S6)
11-4-7465	Compare Courses of Action (COAs) (MDMP) (S6)
11-4-7467	Produce Order or Plan (MDMP) (S6)
11-4-7661	Synchronize Tactical Operations (S6)
17-6-5120.17-WT02	Transfer Command and Control (C2) Functions During Displacement (S3)
17-6-5140.17-WT02	Establish the Warfighter Information Network (WIN) (S3)
17-6-5160.17-WT02	Display the Common Operational Picture (COP) (S3)
17-6-5220.17-WT02	Assess Tactical Situation and Operations (Battle Tracking) (S3)
17-6-5230.17-WT02	Plan Intelligence, Surveillance, and Reconnaissance (ISR) (S3)
17-6-5300.17-WT02	Define the Battlefield Environment (IPB) (S3)
17-6-5310.17-WT02	Describe the Battlefield's Effects on Maneuver Assets (IPB) (S3)
17-6-5320.17-WT02	Evaluate the Maneuver Threat (IPB) (S3)
17-6-5330.17-WT02	Determine Threat Maneuver Courses of Action (COAs) (IPB) (S3)
17-6-5340.17-WT02	Decide Surface Targets to Attack (S3)
17-6-5350.17-WT02	Receive the Mission (MDMP) (S3)
17-6-5360.17-WT02	Conduct Mission Analysis (MDMP) (S3)
17-6-5410.17-WT02	Develop Courses of Action (COAs) (MDMP) (S3)
17-6-5420.17-WT02	Analyze Courses of Action (COAs) (MDMP) (S3)
17-6-5430.17-WT02	Compare Courses of Action (COAs) (MDMP) (S3)
17-6-5440.17-WT02	Approve Course of Action (COA) (MDMP) (S3)
17-6-5450.17-WT02	Produce Order or Plans (MDMP) (S3)
17-6-5510.71-WT02	Conduct Coordination and Liaison (S3)
17-6-5600.17-WT02	Synchronize Maneuver Support (S3)
27-6-5220.27-WT10	Assess Tactical Situation and Operations (Battle Tracking) (BOLT)
27-6-5221.27-WT10	Develop Staff Estimates (BOLT)
27-6-5360.27-WT10	Conduct Mission Analysis (MDMP) (BOLT)
27-6-5450.27-WT10	Produce Order or Plans (MDMP) (BOLT)
27-6-5600.27-WT10	Provide Legal Support for Operations
34-6-5120.34-WT01	Transfer Command and Control (C2) Functions During Displacement (S2/ACT)

<b>Task ID</b>	<b>Task Title</b>
34-6-5140.34-WT01	Establish the Warfighter Information Network (WIN) (S2/ACT)
34-6-5160.34-WT01	Display the Common Operational Picture (COP) (S2/ACT)
34-6-5220.34-WT01	Assess Tactical Situation and Operations (Battle Tracking)(S2/ACT)
34-6-5230.34-WT93	Plan Intelligence, Surveillance, and Reconnaissance (ISR) (S2/ACT)
34-6-5231.34-WT01	Conduct HUMINT Collection Operations (S2/ACT)
34-6-5232.34-WT01	Conduct Counter-Intelligence Support Operations (S2/ACT)
34-6-5300.34-WT01	Define the Battlefield Environment (IPB) (S2/ACT)
34-6-5310.34-WT01	Describe the Battlefield's Effects (IPB) (S2/ACT)
34-6-5320.34-WT01	Evaluate the Threat (IPB) (S2/ACT)
34-6-5330.34-WT01	Determine Threat Courses of Action (COAs) (IPB) (S2/ACT)
34-6-5340.34-WT01	Decide Surface Targets to Attack (S2/ACT)
34-6-5350.34WT01	Receive the Mission (MDMP) (S2/ACT)
34-6-5360.20-WT93	Conduct Mission Analysis (MDMP) (S2/ACT)
34-6-5410.34-WT01	Develop Courses of Action (COAs) (MDMP) (S2/ACT)
34-6-5420.34-WT01	Analyze Courses of Action (COAs) (MDMP) (S2/ACT)
34-6-5430.34-WT01	Compare Courses of Action (COAs) (MDMP) (S2/ACT)
34-6-5450.34-WT01	Produce Order or Plans (MDMP) (S2/ACT)
34-6-5600.34-WT01	Synchronize Intelligence Operations (S2/ACT)
44-2-5120.44-WT92	Transfer Command and Control (C2) Functions During Displacement (Air Defense Artillery Element)
44-2-5140.44-WT92	Establish the Warfighter Information Network (WIN) (Air Defense Artillery Element)
44-2-5160.44-WT92	Display the Common Operational Picture (COP) (Air Defense Artillery Element)
44-2-5220.44-WT92	Assess Tactical Situation and Operations (Battle Tracking) (Air Defense Artillery Element)
44-2-5230.44-WT92	Plan Intelligence, Surveillance and Reconnaissance (ISR) (Air Defense Artillery Element)
44-2-5300.44-WT92	Define the Battlefield Environment (IPB) (Air Defense Artillery Element)
44-2-5310.44-WT92	Describe the Battlefield's Effects (IPB) (Air Defense Artillery Element)
44-2-5320.44-WT92	Evaluate the Aerial Threat (IPB) (Air Defense Artillery Element)
44-2-5330.44-WT92	Determine Aerial Threat Courses of Action (COAs) (IPB) (Air Defense Artillery Element)
44-2-5350.44-WT92	Receive the Mission (MDMP) (Air Defense Artillery Element)
44-2-5360.44-WT92	Conduct Mission Analysis (MDMP) (Air Defense Artillery Element)
44-2-5410.44-WT92	Develop Courses of Action (COAs) (MDMP) (Air Defense Artillery Element)
44-2-5420.44-WT92	Analyze Courses of Action (COAs) (MDMP) (Air Defense Artillery Element)
44-2-5430.44-WT92	Compare Courses of Action (COAs) (MDMP) (Air Defense Artillery Element)
44-2-5450.44-WT92	Produce Order or Plans (MDMP) (Air Defense Artillery Element)

<b>Task ID</b>	<b>Task Title</b>
44-2-5610.44-WT92	Coordinate Airspace Command and Control (Air Defense Artillery Element)
63-6-5120.63-WT10	Transfer Command and Control (C2) Functions During Displacement (S1/S4/Support Operations)
63-6-5140.63-WT10	Establish the Warfighter Information Network (WIN) (S1/S4)
63-6-5160.63-WT10	Display the Common Operational Picture (COP) (S1/S4)
63-6-5220.63-WT10	Assess Tactical Situation and Operations (Battle Tracking) (Support Operations)
63-6-5221.63-WT10	Assess Tactical Situation and Operations (Battle Tracking) (S4)
63-6-5222.63-WT10	Assess Tactical Situation and Operations (Battle Tracking) (S1)
63-6-5225.63-WT10	Assess Tactical Situation and Operations (Battle Tracking) (Chaplain)
63-6-5226.63-WT10	Develop Staff Estimates (Personnel)
63-6-5227.63-WT10	Develop Staff Estimates (Religious Support)
63-6-5228.63-WT10	Develop Staff Estimates (Logistics)
63-6-5350.63-WT10	Receive the Mission (MDMP) (S1)
63-6-5351.63-WT10	Receive the Mission (MDMP) (S4)
63-6-5360.63-WT10	Conduct Mission Analysis (MDMP) (S4)
63-6-5361.63-WT10	Conduct Mission Analysis (MDMP) (S1)
63-6-5362.63-WT10	Conduct Mission Analysis (MDMP) (Support Operations)
63-6-5363.63-WT10	Conduct Mission Analysis (MDMP) (Chaplain)
63-6-5410.63-WT10	Develop Courses of Action (COAs) (MDMP) (Support Operations)
63-6-5411.63-WT10	Develop Courses of Action (COAs) (MDMP) (S1)
63-6-5412.63-WT10	Develop Courses of Action (COAs) (MDMP) (S4)
63-6-5413.63-WT10	Develop Courses of Action (COAs) (MDMP) (Chaplain)
63-6-5420.63-WT10	Analyze Courses of Action (COAs) (MDMP) (Support Operations)
63-6-5421.63-WT10	Analyze Courses of Action (COAs) (MDMP) (S1)
63-6-5422.63-WT10	Analyze Courses of Action (COAs) (MDMP) (S4)
63-6-5423.63-WT10	Analyze Courses of Action (COAs) (MDMP) (Chaplain)
63-6-5430.63-WT10	Compare Courses of Action (COAs) (MDMP) (S1)
63-6-5431.63-WT10	Compare Courses of Action (COAs) (MDMP) (Support Operations)
63-6-5432.63-WT10	Compare Courses of Action (COAs) (MDMP) (S4)
63-6-5451.63-WT10	Produce Order or Plans (MDMP) (Support Operations)
63-6-5452.63-WT10	Produce Order or Plans (MDMP) (S1)
63-6-5453.63-WT10	Produce Order or Plans (MDMP) (S4)
63-6-5454.63-WT10	Produce Order or Plans (MDMP) (Chaplain)
63-6-5500.63-WT10	Conduct Rehearsals (Logistics)
63-6-5601.63-WT10	Perform Ongoing Functions (Internal Logistics ) (S4)
63-6-5602.63-WT10	Perform Ongoing Functions (Transportation and Movement) (S4)
63-6-5608.63-WT10	Provide Supplies (Class I, VI, and Water)
63-6-5609.63-WT10	Provide Supplies (Class II, IV, VII, and IX)
63-6-5610.63-WT10	Provide Petroleum, Oil, and Lubricants ((POL) Class III B/P)

<b>Task ID</b>	<b>Task Title</b>
63-6-5611.63-WT10	Provide Arms (Class V)
63-6-5612.63-WT10	Provide Maintenance Management
63-6-5613.63-WT10	Provide Transportation Support
63-6-5614.63-WT10	Perform Field Services
63-6-5616.63-WT10	Provide Human Resource Support
71-0-5150.71-WT07	Establish Information Assurance (IA)
71-6-1161.71-FH02	Plan Intelligence, Surveillance, and Reconnaissance (ISR) Operations
71-6-1162.71-FH02	Define the Battlefield Environment (IPB)
71-6-1163.71-FH02	Describe the Battlefield's Effects (IPB)
71-6-1164.71-FH02	Evaluate the Threat (IPB)
71-6-1165.71-FH02	Determine Threat Courses of Action (COAs) (IPB)
71-6-3161.71-FH15	Decide Surface Targets to Attack
71-6-5361.71-FH06	Conduct Information Assurance (IA)
71-6-7161.71-FH06	Establish Command Post (CP) Operations
71-6-7162.71-FH06	Establish the Command Post (CP) Warfighter Information Network (WIN)
71-6-7164.71-FH06	Transfer Command and Control (C2) Functions During Displacement
71-6-7261.71-FH08	Display the Common Operational Picture (COP)
71-6-7362.71-FH08	Assess Tactical Situation and Operations (Battle Tracking)
71-6-7461.71-FH08	Receive the Mission (MDMP)
71-6-7462.71-FH08	Conduct Mission Analysis (MDMP)
71-6-7463.71-FH08	Develop Courses of Action (COAs) (MDMP)
71-6-7464.71-FH08	Analyze Courses of Action (COAs) (MDMP)
71-6-7465.71-FH08	Compare Courses of Action (COAs) (MDMP)
71-6-7466.71-FH08	Approve Course of Action (COA) (MDMP)
71-6-7467.71-FH08	Produce Order or Plans (MDMP)
71-6-7561.71-FH13	Conduct Coordination and Liaison
71-6-7562.71-FH13	Conduct Digital Rehearsals
71-6-7661.71-FH08	Synchronize Tactical Operations
71-6-7861.71-FH06	Maintain the Command Post (CP) Warfighter Information Network (WIN)

## Appendix F

### ABCS Common Core Task

TASK #	TITLE
150-GPU-9100-WT07	Establish the Common Tactical Picture (CTP) Elements (ABCS v6.2.x)
150-GPU-9101-WT07	Update the Common Tactical Picture (CTP) Elements (ABCS v6.2.x)
150-GPU-9102-WT07	Process a Message using Common Operating Environment Message Processor (CMP) (ABCS v6.2.x)
150-GPU-9103-WT07	Perform Army Battle Command System (ABCS) Data Distribution (ABCS v6.2.x)
150-GPU-9104-WT07	Conduct Terrain Evaluation Using the Common Tactical Picture (CTP) Applications Program (ABCS v6.2.x)
150-GPU-9106-WT07	Conduct Collaborative Planning Using Sunforum (ABCS v6.2.x)
150-GPU-9110-WT07	Create a Plan or Order Utilizing the Plan Manager Light Tool (ABCS v6.2.x)
150-GPU-9111-WT07	Perform ABCS Security Operations Suite (SOS) Functions (ABCS v6.2.x)
150-GPU-9120-WT07	Establish the Common Tactical Picture (CTP) Elements (ABCS v6.3.x)
150-GPU-9121-WT07	Update the Common Tactical Picture (CTP) Elements (ABCS v6.3.x)
150-GPU-9122-WT07	Process a Message using Common Operating Environment Message Processor (CMP) (ABCS v6.3.x)
150-GPU-9123-WT07	Perform Army Battle Command System (ABCS) Data Distribution (ABCS v6.3.x)
150-GPU-9124-WT07	Conduct Terrain Evaluation Using the Common Tactical Picture (CTP) Applications Program (ABCS v6.3.x)
150-GPU-9126-WT07	Conduct Collaborative Planning Using Sunforum (ABCS v6.3.x)
150-GPU-9130-WT07	Create a Plan or Order Utilizing the Plan Manager Light Tool (ABCS v6.3.x)
150-GPU-9131-WT07	Perform ABCS Security Operations Suite (SOS) Functions (ABCS v6.3.x)
150-MCL-0002-WT07	Initialize the Maneuver Control System Light (MCS-L) Software Application (v6.3.0.5)
150-MCL-0003-WT07	Perform Shut-down Procedures on the Maneuver Control System Light (MCS-L)
150-MCL-0004-WT07	Perform File Management using Windows NT Explorer on the Maneuver Control System (MCS-L)
150-MCL-0006-WT07	Establish the Configuration Environment on the Maneuver Control System Light (MCS-L)
150-MCL-0008-WT07	Establish the Maneuver Control System (MCS) Filter on the MCS Light (MCS-L)
150-MCL-0009-WT07	Track Information Requirements (Irs), Significant Events, and Decision Points (DPs) on the Maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0010-WT07	Convert Datum / Ellipsoid and Coordinate Types using the Maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0012-WT07	Produce Plan Documents, Overlay (s), Task Organizations (Tos), and Information Tracker using the Maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0013-WT07	Configure Plan Documents, Overlay(s), Task organizations (Tos), and Information Tracker using the Maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0014-WT07	Create a Unit Task organization (UTO) using the maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0015-WT07	Load Map Data Files (Magellan) using the Maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0016-WT07	Print an Overlay Using the Maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0017-WT07	Conduct Force Ration Analysis using the Maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0018-WT07	Process a Message using the Common Operating Environment Message Processor (CMP) using the Maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0019-WT07	Conduct Collaborative Planning using the Maneuver Control System Light (MCS-L) (v6.3.0.5)
150-MCL-0212-WT07	Create a Unit Task Organization (UTO) using the Maneuver Control System (MCS) (v6.3.x)



<b>TASK #</b>	<b>TITLE</b>
171-147-0001	Prepare/Send Combat Messages using FBCB2 version 3.4
171-147-0002	Perform Startup Procedures for Force XXI Battle Command Brigade and Below (FBCB2) version 3.4
171-147-0005	Apply Message Addressing Features in FBCB2 version 3.4
171-147-0006	Perform Message Management using FBCB2 version 3.4
171-147-0007	Prepare/Send Overlays using FBCB2 version 3.4
171-147-0008	Prepare/Send Reports using FBCB2 version 3.4
171-147-0009	Prepare/Send Fire/Alert Messages using FBCB2 version 3.4
171-147-0010	Prepare/Send Order/Request Messages using FBCB2 version 3.4
171-147-0011	Perform Before-Operations Preventive Maintenance Checks and Services on FBCB2 version 3.4
171-147-0012	Perform Shut-Down Procedures For FBCB2 version 3.4
171-147-0013	Perform After-Operations Preventive Maintenance Checks and Services on FBCB2 version 3.4
171-147-0014	Perform After-Operations Preventive Maintenance Checks and Services on FBCB2 version 3.4
171-147-0015	Prepare/Send a Logistical Status Report using FBCB2 version 3.4
171-147-0017	Employ Map Functions using FBCB2 version 3.4
171-147-0019	Employ FIPR Functions using FBCB2 version 3.4
171-147-0020	Employ Status Functions using FBCB2 version 3.4
171-147-0021	Employ Admin Functions using FBCB2 version 3.4
171-147-0022	Employ APPS Functions using FBCB2 version 3.4
171-147-0023	Employ NAV Functions using FBCB2 version 3.4
171-147-0024	Employ Quick Send Functions using FBCB2 version 3.4
171-147-0025	Employ Filters Functions using FBCB2 version 3.4
113-583-2007-WT9	Install a Mission Data Load (MDL) on a target Platform version 2.2
113-583-2004-WT9	Operate Data Transfer Device / Mission Data loader (DTD/MDL)

Appendix G  
Duty Locations of BSNCOs Participating

• June 2002

- 1st BDE, 4ID (Q)
- 1-5 CAV, 1CD (Q)
- 2-12 CAV, 1CD (Q)
- 544 MAINT BN, 13 COSCOM (O)
- 3-8 CAV, 1CD (Q)
- 4th BDE, 4ID (Q)
- 1-44 ADA, 4ID (Q)

• July 2002

- 1CD DIVARTY CPX (O)
- 4ID DIVARTY TOCEX (O)
- 1-227 AVN TOC TNG, 1CD (O)
- 2-5 CAV, 1CD (Q)
- 404 DASB, 4ID (Q)
- 1-8 CAV, 1CD (Q)
- 4th BDE, 1CD (Q)
- DISCOM, 1CD (Q)
- 104th MI, 4ID (Q)
- 8th ENG (Q)

• August 2002

- 3-16 FA, 4ID (Q)
- 4-5 ADA, 1CD (Q)
- UFL (Various analog & digital TOCs) (O)
- 1CD Pegasus Point, 5-14
- 2 BCT 4ID TOC TNG, 15-22
- UFL, 1-30 180th TRANS, 13th COSCOM (Q)
- 49th TRANS, 13th COSCOM (Q)
- UFL Setup, (O)
- 20th ENG, 1CD (Q)
- UFL (DTAC, DMAIN, 1CD & 4ID; 3 BCT, 4BDE, D/A, 1CD; SC (O)
- 15th MI, 504th MI BDE (Q)

• September 2002

- 1st MED BDE (Q)
- 1st BDE, 1CD (O)
- BSNCOC # 13-02 (FT Bliss) (Q)

O = Observation                      Q = Questionnaire

Note: This study was not able to

## Appendix H

### List of Acronyms

ABCS	Army Battle Command Systems
ADCST	Assistant Deputy Chief of Staff, Training
ADCST-W	Assistant Deputy Chief of Staff for Training - West
AI	Assistant Instructors
AIT	Advanced Individual Training
ASI	Additional Skill Identifier
BSNCO	Battle Staff Noncommissioned Officer
BSNCOC	Battle Staff Noncommissioned Officer Course
CALL	Center for Army Lessons Learned
CIC	Command Information Center
DCST-W	Assistant Deputy Chief of Staff for Training, West Collective Training Directorate
IDEP	Institutional Digital Educational Plan
IPB	Intelligence Preparation of the Battlefield
LSD	Large Screen Display
MDMP	Military Decision Making Process
NBC	Nuclear, Biological, and Chemical
NCO	Non-Commissioned Officer
NET	New Equipment Training
OJT	On-the-job Training
OPLAN/OPORD	Plan & Operations Orders
OPTEMPO	Operational Tempo
PERSCOM	U.S. Army Personnel Command
TOC	Tactical Operation Center
TRADOC	U.S. Army Training and Doctrine Command
USASMA	U.S. Army Sergeants Major Academy
VTT	Video Tele-Training